NEW APPLICATION

ORIGINAL

0000152638

ADOT
Intermodal Transportation

February 24, 2014

Arizona Corporation Commission
Office of Railroad Safety
Attn: Chris Watson
1200 W Washington Street
Phoenix, AZ 85007

RE: Application to upgrade existing railroad signals and surface
Project: Navajo Road in Bylas, Arizona
Federal Project #STP-ISC-0(202)T
ADOT TRACS #SR25401C
Navajo Road Crossing DOT# 742-309Y

RR-02634A-14-0064

Mr. Watson,

Please find enclosed the original and 13 copies of the application to allow AZER to furnish and install 2 gate and flasher units on Navajo Rd/AZER highway-rail crossing and constant warning circuitry. Also enclosed is an excerpt from Atwell Project H7637 01C, Stage III plans. I have also included pictures of both road approaches to this crossing for reference.

Feel free to contact me if you have any questions.

Sincerely,

Jason Pike
Railroad and Utility Coordinator
Arizona Department of Transportation
205 S. 17th Ave, Room 357 MD 618E
Phoenix, AZ 85007
Phone: 602-712-7149 jpike@azdot.gov

February 24, 2014

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1200 W Washington Street
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RE: Application to upgrade existing railroad signals and surface
Project: Navajo Road in Bylas, Arizona
Federal Project #STP-ISC-0(202)T
ADOT TRACS #SR25401C
Navajo Road Crossing DOT# 742-309Y

Mr. Watson,

This application is being submitted to allow the Arizona Eastern Railroad (AZER) to furnish and install 2 gate and flasher units on Navajo Rd. and constant warning circuitry.

1. **Project Location and Description**
   The project is located at the crossing of AZER and Navajo Rd. south of US70 in Bylas, Arizona. This crossing consists of one mainline with daily usage for AZER. Navajo Rd. is an at-grade roadway and is used for 2 way traffic, consisting of 1 thru westbound lane and 1 thru eastbound lane.

   The project consists of installing two new gate and flasher units on the outside edge of Navajo, installing a new concrete crossing surface. ADOT will also construct civil improvements including new sidewalk from the existing US70 ROW to Rope Drive, re-striping, and improving the road approaches, these civil improvements will help facilitate the necessary railroad safety improvements at the crossing.

2. **Why the crossing is needed**
   Based on the 2012 crossing improvement array, the Navajo Rd crossing was selected for upgrades to the signal and surface.

3. **Construction Phasing**
   The railroad crossing is scheduled to be done prior to the road work. Once the utility, environmental, and right-of-way clearances are obtained, ADOT can apply for and receive FHWA Construction Authorization and authorize AZER to order their signal materials. Once an Opinion and Order is issued, AZER will do the track work and install signal equipment. The railroad improvements will be installed by AZER within 36 months of the receipt of an Opinion and Order from the ACC.

4. **Maintenance of the crossing**

AZER will be responsible for installing and maintaining the railroad surface and signal equipment. The San Carlos Apache Tribe will be responsible for maintaining the road approaches and sidewalks that are outside of both ADOT and AZER responsibility. ADOT will maintain the highway (US70) within the limits of their ROW.

Project Funding

100% of the funding will be provided thru the Federal Highway Administration thru their Section 130/highway-railroad crossing safety improvement program.

Costs are as follows: US70 Project costs are $1,000,000+

Preliminary and Construction Engineering	$10,000.00
AZER Furnish and Install Flashers and Gates and Constant Warning	$300,000.00
Total Cost	$310,000.00

5. **Other information (based on typical Staff Data Requests):**

1. Provide Average Daily Traffic Counts for each of the locations.
   Navajo Rd.-2012 Traffic Count = 540 vehicles per day

2. Please describe the current Level of Service (LOS) at each intersection.
   Current Level of Service is unknown.

3. Provide any traffic studies done by the road authorities for each area.
   No traffic studies have been completed recently that include Navajo Rd.

4. Provide the population of the City the crossing is located in.
   2010 census: 1,962 persons.

5. Provide what warning devices are currently installed at the crossing.
   Currently there are flashing lights and gates on the outside edges of the roadway for both westbound and eastbound traffic.

6. Provide distances in miles to the next public crossing on either side of the proposed project location. Are any of these grade separations?
   Centerpoint Rd (742 306D) is an at-grade crossing 2.0 miles to the south. Existing Home Alone Rd. (742 307K) is an at-grade crossing 1.5 miles to the south. Home Alone is being re-aligned in the current US70 project.

7. How and why was grade separation not decided on at this time? Please provide any studies that were done to support these answers.

   Because this project is Section 130 (Highway-Rail Safety), grade separation was not considered.

8. If this crossing was grade separated, provide a cost estimate of the project.

   Estimate $30,000,000++

9. Please describe what the surrounding areas are zoned for near this intersection. i.e. Are there going to be new housing developments, industrial parks etc.

   The areas adjacent to the Navajo railroad crossing are residential.

10. Please supply the following: number of daily train movements through the crossing, speed of the trains, and the type of movements being made (i.e. thru freight or switching). Is this a passenger train route?

    Per AZER, there are a total of 2 train movements over the crossing per day, 0 switching movements and 0 daytime thru movements (2 trains run at night, one in each direction). The typical speed range over the crossings is 10mph and that is also the maximum Time Table speed.

    This is not a passenger train route.

11. Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.

    Students in Bylas are served by schools in both Bylas and Fort Thomas.

    - Fort Thomas Elementary School (Grades KG-6)
      15560 W. Elementary School Rd., Fort Thomas, AZ
    - Fort Thomas High School (Grades 7-12)
      Highway 70, Fort Thomas, AZ 85536
    - Mount Turnbull Academy (Grades 9-12)
      Hwy. 70, Bylas, AZ 85530

12. Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.

    Per Fort Thomas Unified School District, school buses utilize this crossing 36 times per day.

13. Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.

    Bylas Health Center – 101 Medical Drive (east of US70, Approximate MP= 295).
    This crossing is on a major emergency service route for the health center.

14. Please provide total cost of the railroad improvements to each crossing.

    Cost described above.

15. Provide any information as to whether vehicles carrying hazardous materials utilize this crossing and the number of times a day they might cross it.

    Data unavailable

16. Please provide the posted vehicular speed limit for the roadway.

    Navajo Road – 25 MPH

17. Do any buses (other than school buses) utilize the crossing, and how many times a day do they cross the crossing.

    San Carlos Apache Tribe-Transit Department reports that an Employee Casino Shuttle may drive across the tracks once a night at 1:30 am. A transport to the SC Skill Center may also cross the tracks M-F depending on the season.

18. Please indicate whether any spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application. Please include the reason for the removal, date of the removal and whether an at-grade crossing or crossings were removed in order to remove the spur line.

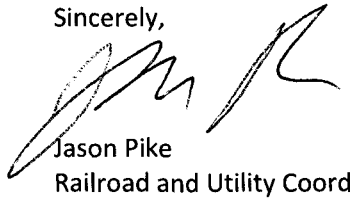
    None

19. Please fill in the attached FHWA Grade Separation Guidelines Table, (from FHWA's 2007 revised second edition Railroad Highway Grade-Crossing Handbook, page 151) with a yes or no answer as to weather each item applies. Also, please provide all information to support your answers of yes or no (i.e. vehicle delay numbers, any calculations that were performed to get the answers).

20. Based on the current single track configuration at the crossings specified by this application, please provide the current traffic blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

    The delay at the crossing is really a function of the average length of the train and the average speed that is traveling. An example that a 7,000 foot train traveling 30 miles per hour would cause a traffic delay of approximately 3.5 minutes.

Sincerely,

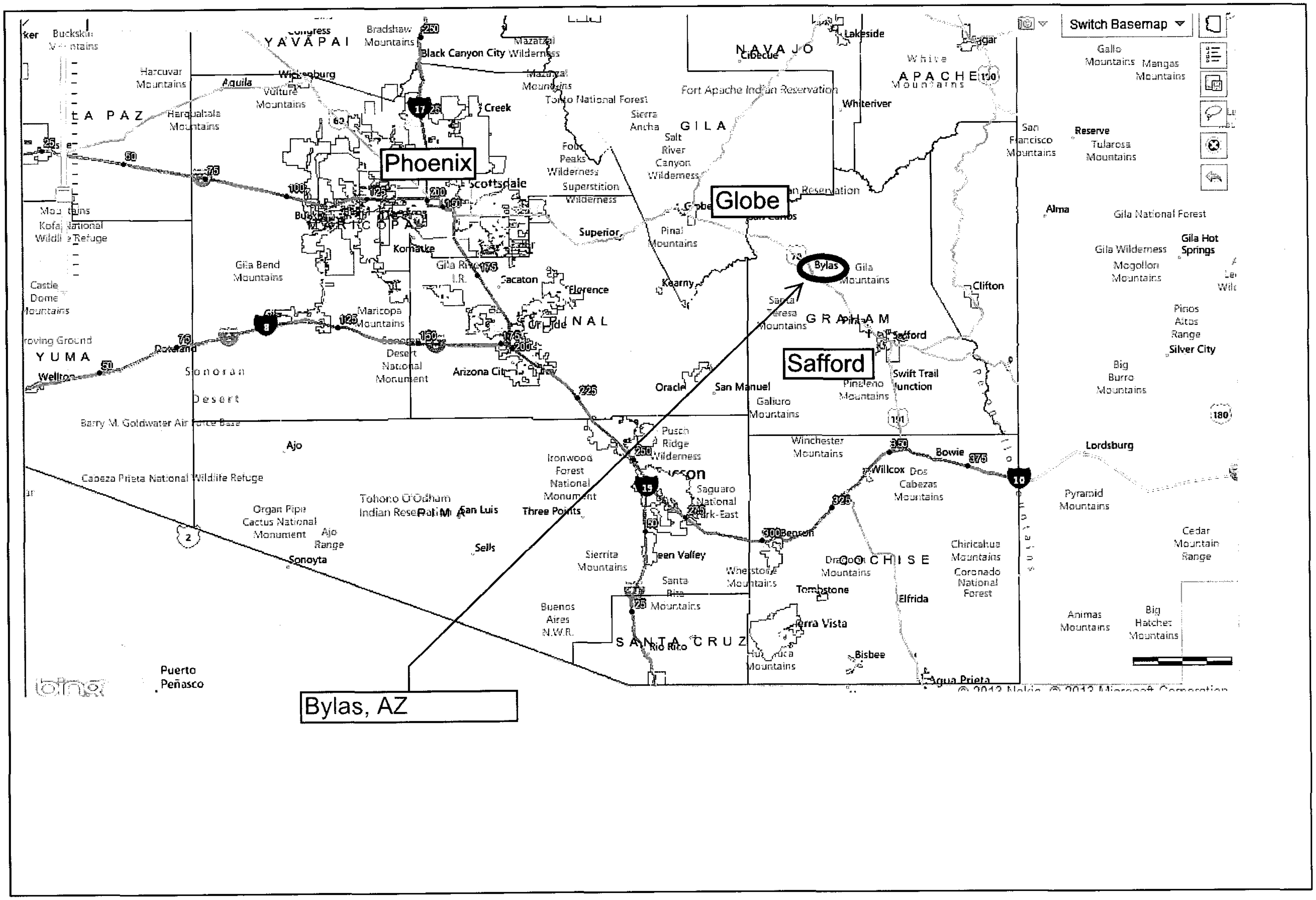


Jason Pike
Railroad and Utility Coordinator
Arizona Department of Transportation
205 S. 17th Ave, Room 357 MD 618E
Phoenix, AZ 85007
Phone: 602-712-7149 jpike@azdot.gov

FHWA - GRADE SEPARATION GUIDELINES

Highway-rail grade crossings should be considered for grade separation or otherwise eliminated across the railroad **right of way whenever one or more of the following conditions exist:**

		Navajo Rd			
The highway is a part of the designated Interstate Highway System	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
The highway is otherwise designed to have full controlled access	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
The posted highway speed equals or exceeds 70 mph	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
AADT exceeds 100,000 in urban areas or 50,000 in rural areas	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
Maximum authorized train speed exceeds 110 mph	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
An average of 150 or more trains per day or 300 million gross tons/year	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
Crossing exposure (trains/day x AADT) exceeds 1M in urban or 250k in rural; or passenger train crossing exposure exceeds 800k in urban or 200k in rural	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
Expected accident frequency for active devices with gates, as calculated by the US DOT Accident Prediction Formula including five-year accident history, exceeds 0.5	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			
Vehicle delay exceeds 40 vehicle hours per day	Crossing Currently meets the criteria	N			
	Crossing meets the criteria by 2030	N			


Switch Basemap
Phoenix
Globe
Safford
Bylas
Bylas, AZ
YAVAPAI
LA PAZ
YUMA
MARICOPA
PINAL
GILA
GRAHAM
COCHISE
SANTA CRUZ
NAVAJO
APACHE
Scottsdale
Black Canyon City Wilderness
Creek
Wickenburg
Aguila
Superior
Kearny
Florence
Sacaton
Casa Grande
Arizona City
Oracle
San Manuel
Willcox
Bowie
Benson
Tombstone
Sierra Vista
Bisbee
Elfrida
Agua Prieta
Lordsburg
Silver City
Clifton
Whiteriver
Lakeside
Fort Apache Indian Reservation
Tonto National Forest
Gila National Forest
Tohono O'Odham Indian Reservation
Ajo
Sells
Sonoyta
Puerto Peñasco
Wellton
Barry M. Goldwater Air Force Base
Cabeza Prieta National Wildlife Refuge
Organ Pipe Cactus National Monument
Three Points
Swift Trail Junction
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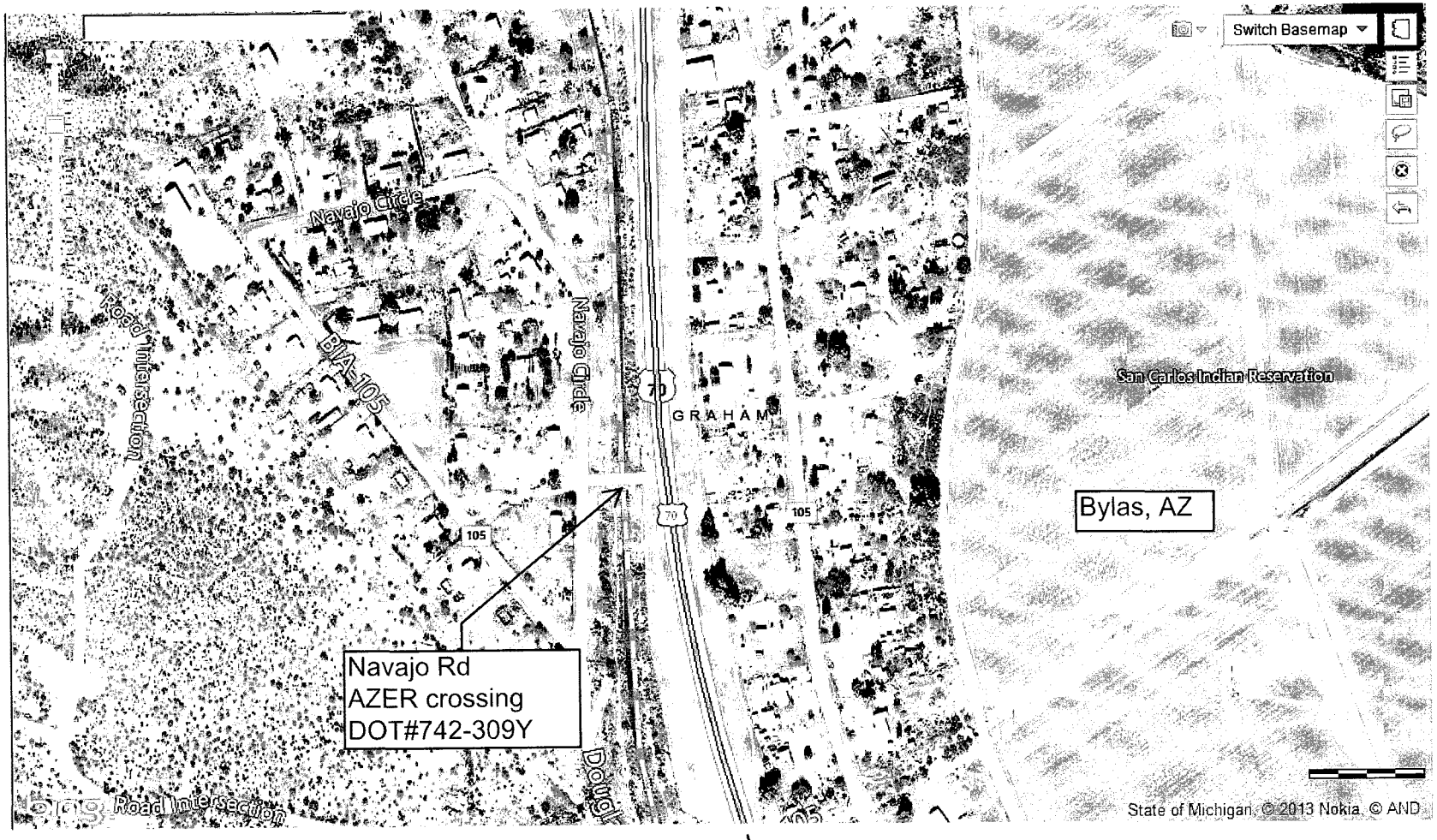
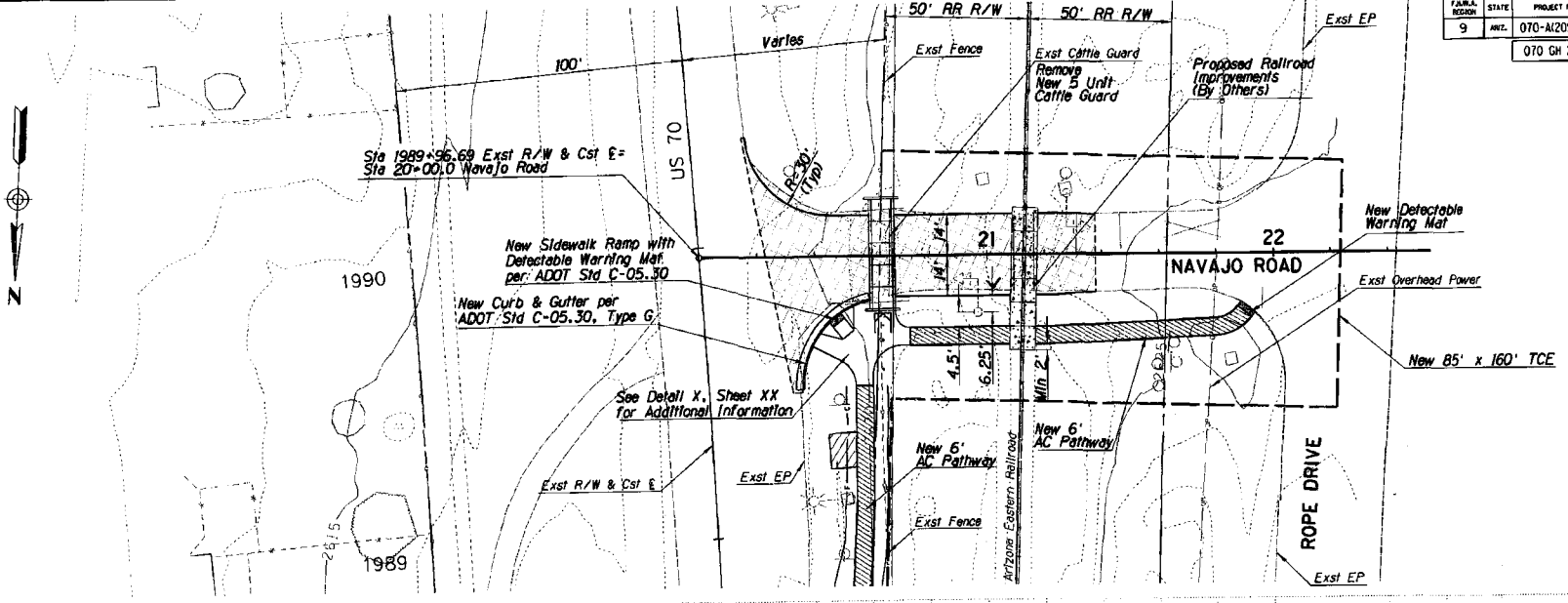
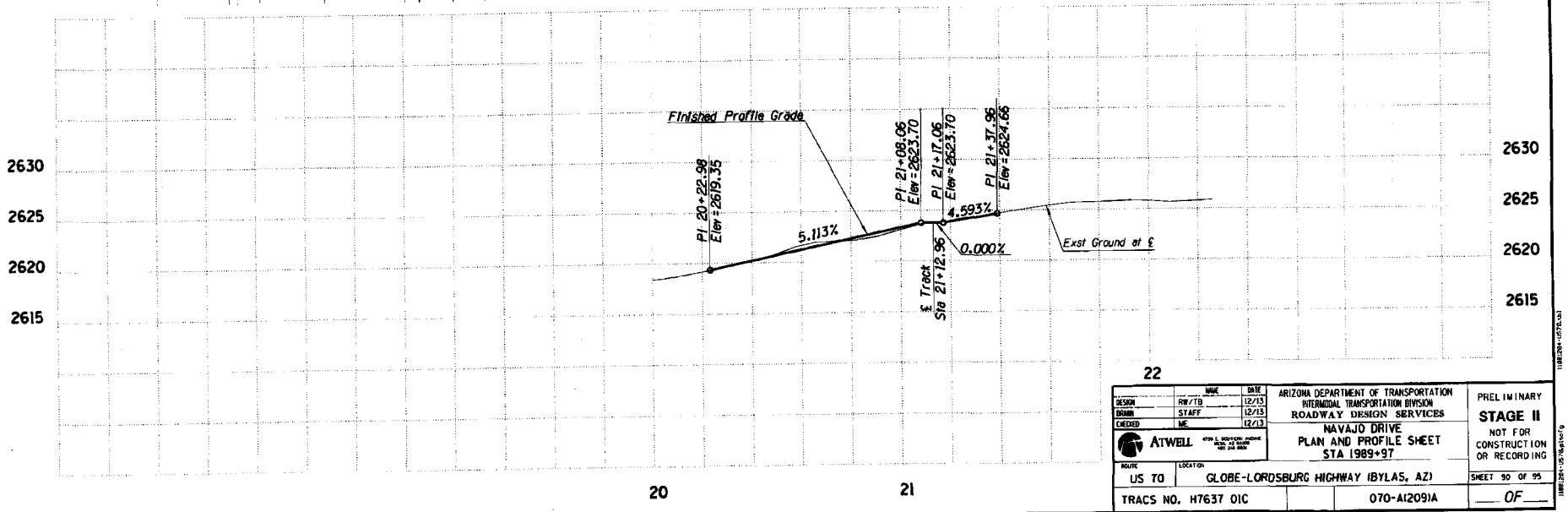
To US70 MP294



To US70 MP295





F.A.H.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	070-A(209)A	90	95	

070 GH 294

	NAME	DATE
DESIGN	RW/TB	12/13
DRAWN	STAFF	12/13
CHECKED	ME	12/13

ATWELL

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
ROADWAY DESIGN SERVICES

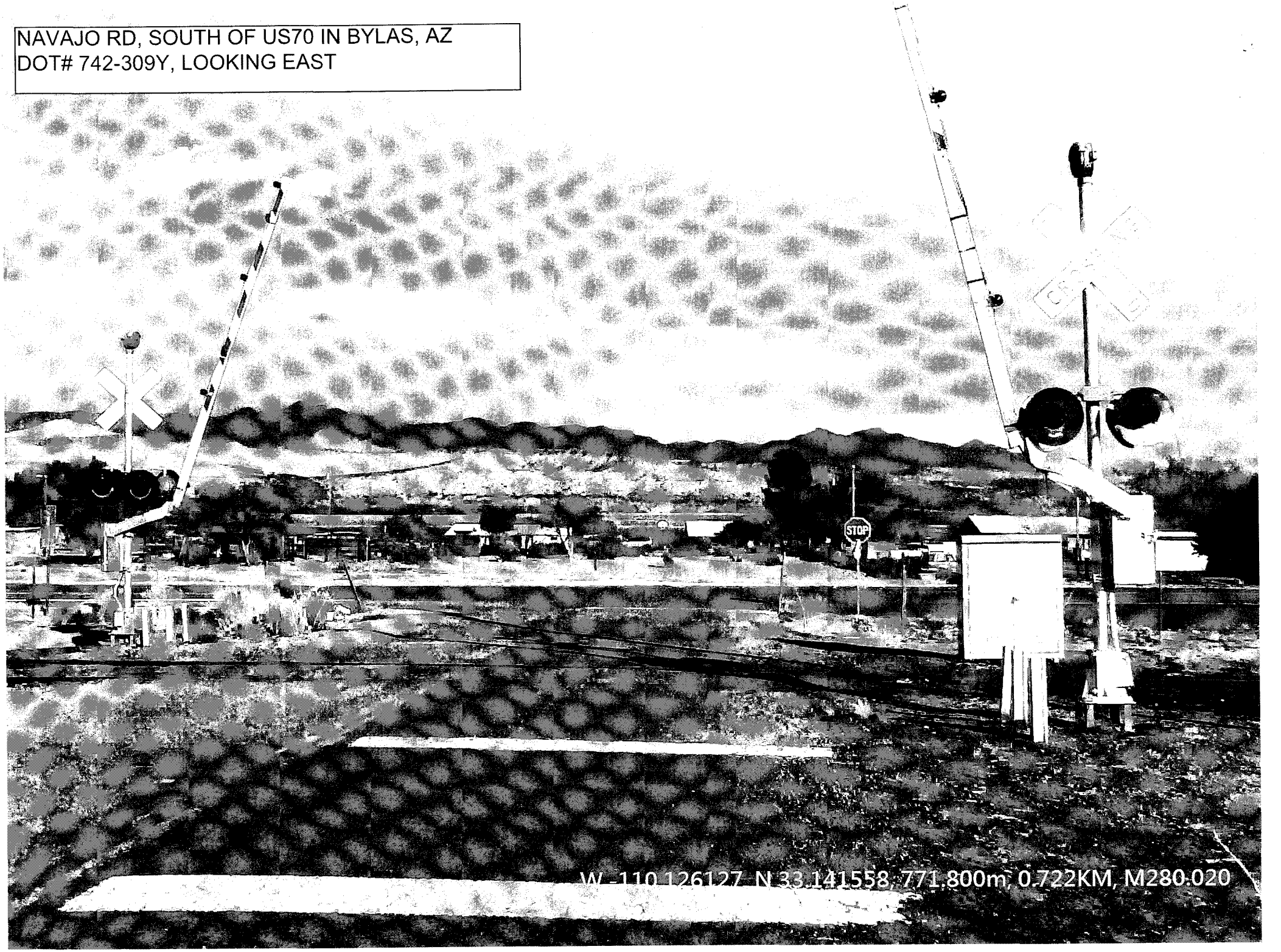
NAVAJO DRIVE
PLAN AND PROFILE SHEET
STA 1989+97

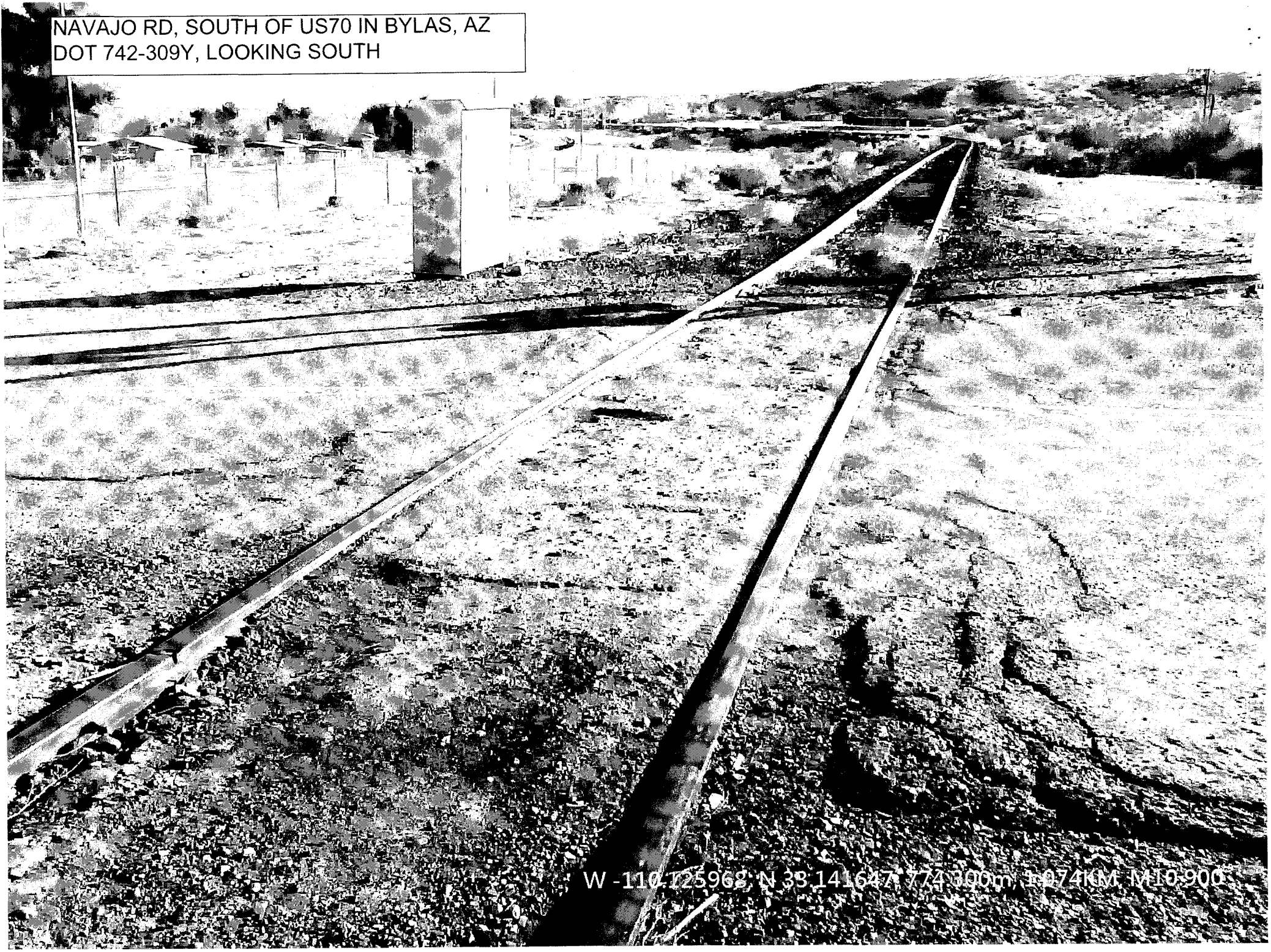
PRELIMINARY
STAGE II
NOT FOR CONSTRUCTION OR RECORDING

ROUTE	LOCATION		
US 70	GLOBE-LORDSBURG HIGHWAY (BYLAS, AZ)		SHEET 90 OF 95
TRACS NO. H7637 01C		070-A(209)A	___ OF ___

K:\11081284-ADOT District Manor\dgn\Sheets\H7637rw1.dgn 12/11/2013 8:49:24 PM rivetzema

NAVAJO RD, SOUTH OF US70 IN BYLAS, AZ
DOT# 742-309Y, LOOKING EAST




NAVAJO RD, SOUTH OF US70 IN BYLAS, AZ
DOT 742-309Y, LOOKING SOUTH
W -110.125968 N 33.141647 774.300m 1.074KM M10.900